

kinsville, Ga., in the Altamaha River basin, 7.60 inches of rain fell on the 22-23d and caused an unusual rise of 11.3 feet in the river at that point on the 24th.

No appreciable damage occurred in connection with these floods; the benefits gained from the increase in water supply probably more than offset any damage or inconvenience caused.

*East Gulf of Mexico drainage.*—Heavy rains occurred over the entire Tombigbee and Black Warrior watersheds on December 22-23, ranging from 1.25 to 2.75 inches over the Black Warrior and upper Tombigbee basins and from 3 to 6.25 inches over the lower Tombigbee basin. The stages rose rapidly, and rains again on December 25-26 caused still further rises. Flood stage was exceeded, however, only at Lock No. 3, Whitfield, Ala., on the lower Tombigbee River, where a stage of 40.6 feet was reached on December 28th.

Flood stage was also exceeded slightly at a few points in the Flint, Apalachicola and Pearl River basins, but resulted in no appreciable damage.

*Mississippi system.*—Stages were low or moderately low generally during the month and overflows were reported only in the Grand River at Chillicothe, Mo., the North Canadian River at Yukon, Okla., and the Sulphur River at Ringo Crossing, Tex. In the Grand River, heavy rains over the basin on December 22-23, caused a rise of over 18 feet in 24 hours at Chillicothe.

*Pacific Slope drainage.*—Precipitation was much above normal for the month and light to moderate floods occurred principally in the Sacramento, Willamette and Eel River basins.

The first general rise of importance in the Sacramento River system for the present rainfall season occurred near the middle of the month in connection with an intensive rainstorm that began over the upper drainage area on December 14, and continued at intervals until the 17th. The antecedent soil moisture was fairly high due to nearly normal rainfall during the fall season.

Although no flood stage was actually reached at any reporting river station, some overflow of low ground areas occurred especially in Tehama County. Large quantities of water were diverted at all stationary weirs into the bypasses; the maximum overflow depth at Fremont Weir into Yolo Bypass was 2.1 feet on the 20th. Little Holland Tract (2,700 acres) and Prospect Island (2,500 acres) in Yolo Bypass were flooded. As these islands had not been planted to crops this year, no tangible losses were reported.

Overflows on three separate occasions occurred during the month in the Eel River at Fernbridge, Calif. The first flood, on December 3, developed during the night and was of such slight intensity and short duration that no damage or loss resulted. The floods of December 16-17 and 18-19 were the most destructive since the flood of February 1940. The highest stage reached at Fernbridge was 21.3 feet on the 18th. The damage to flood protection works and roads, and the cost of cleaning up and removing debris is estimated at \$16,000.

Floods occurred in the Willamette River basin from two storm periods, December 1-3 and 15-19. Damage from these floods was slight,

## FLOOD-STAGE REPORT, DECEMBER 1941

[All dates in December unless otherwise specified]

River and station	Flood stage	Above flood stages—dates		Crest	
		From—	To—	Stage	Date
ATLANTIC SLOPE DRAINAGE					
	<i>Feet</i>			<i>Feet</i>	
Tloughnioga: Whitney Point, N. Y.	12	24	25	13.0	25
Saluda: Pelzer, S. C.	6	25	25	6.0	25
Broad: Blairs, S. C.	14	24	24	14.2	24
Santee: Rimini, S. C.	12	26	29	12.6	28
Savannah:					
Butler Creek, Ga.	21	25	26	21.5	25
Clyo, Ga.	11	29	(1)	12.1	31
Ogeechee:					
Midville, Ga.	6	26	30	6.2	27
Dover, Ga.	7	28	(1)	8.7	30
Ocmulgee:					
Macon, Ga.	18	24	24	18.2	24
Abbeville, Ga.	11	25	(1)	13.3	27
Oconee:					
Milledgeville, Ga.	20	24	27	23.0	24
Mt. Vernon, Ga.	16	28	(1)	16.8	31
Altamaha: Charlotte, Ga.	12	28	(1)	15.7	31
EAST GULF OF MEXICO DRAINAGE					
Flint: Albany, Ga.	20	26	(1)	21.8	29
Apalachicola: Blountstown, Fla.	15	26	(1)	19.4	30
Tombigbee: Lock No. 3, Whitfield, Ala.	33	25	31	40.6	28
Pearl: Pearl River, La.	12	28	(1)	14.1	30
MISSISSIPPI SYSTEM					
Upper Mississippi Basin					
Mississippi: Louisiana, Mo.	12	{ 4 27	25 28	{ 12.3 12.1	{ 24 27
Missouri Basin					
Grand: Chillicothe, Mo.	18	24	26	23.5	24
Arkansas Basin					
North Canadian: Yukon, Okla.	8	(1)	(1)	9.8	6
Red Basin					
Sulphur: Ringo Crossing, Tex.	20	{ 3 12 23	{ 4 16 23	{ 22.0 25.5 20.0	{ 3 13 23
WEST GULF OF MEXICO DRAINAGE					
East Fork Trinity: Rockwall, Tex.	10	{ 3 12	3 15	10.7 11.5	3 13
GULF OF CALIFORNIA DRAINAGE					
Colorado Basin					
Gila: Kelvin, Ariz.	5	12	12	5.8	12
PACIFIC SLOPE DRAINAGE					
Eel Basin					
Eel: Fernbridge, Calif.	17.5	{ 3 16 18	{ 3 17 19	18.0 19.2 21.3	3 16 18
Columbia Basin					
South Yamhill:					
Willamina, Ore.	8	19	20	10.9	19
Whiteson, Ore.	38	19	21	41.6	20
McKenzie: Leaburg, Ore.	12	18	19	13.8	18
Long Tom: Monroe, Ore.	10	{ 3 16 23	{ 5 21 (1)	{ 12.1 12.0 10.9	{ 4 20 24-25
Santiam: Jefferson, Ore.	13	{ 3 19	{ 4 21	{ 17.2 16.2	{ 3 20
Luckiamute: Suver, Ore.	25	19	21	27.7	20
Willamette:					
Harrisburg, Ore.	10	{ 3 17 18	{ 5 17 22	{ 11.6 10.0 14.0	{ 3 17 19
Albany, Ore.	20	21	21	20.2	21
Oregon City, Ore.	12	21	23	13.1	22

<sup>1</sup> Continued into following month.

<sup>2</sup> Due to manipulation of Dam No. 24.

<sup>3</sup> Continued from preceding month.

<sup>4</sup> Gage out; stages estimated.